ZERODIVIDE CASE STUDY

Youth Institute/Change Agent Productions

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ZERO DIVIDE™

COMMUNITY / TECHNOLOGY / OPPORTUNITY

EXECUTIVE SUMMARY

What is the impact of our grants? As funders of non-profit social enterprises, or organizations that generate mission related revenue, we too ask this question. Our approach to finding an answer is to evaluate both the social and financial returns of a given enterprise while also weighing the cost of our investment. This case study is an example of how we measure and monitor a key social outcome, improved high school graduation rates and their contribution to lifetime earnings, combined with a financial analysis of the social venture we are seeding. We combine these two measures, social and financial, and evaluate our grant using the traditional investment analysis tool of the discounted cash flow. We discount the future social benefits of the program over the analysis horizon to the present and then subtract, or net out, the cost of the program to arrive at a measure we call net present social value. Please see financial model on page 2.

This case study is about one of our grantees, the Youth Institute in Long Beach, CA. They run an after-school technology leadership program for kids in grades 8-12. Advanced kids in the program can participate in the Institute's complementary technology and digital media earned revenue enterprise called Change Agent Productions. For this venture we project the following:

- 405 youth to complete the leadership and technology training;
- Increased high school graduation rates from 80% to 95%;
- $36,000 average increase per class in lifetime earnings;
- $350,000+ per year in earned revenue;
- $840,000 of ZeroDivide seed investment; and
- $9 million in project net present social value.

Financial Model

Social Value of Incremental Earnings

Median Earnings [1]		Long Beach Unified	Change Agent [4]	Earnings Difference	PV 30 Yr Career [5]	45 Kids
No HS diploma	$ 21,417	19%[2]	5%			
HS diploma	$ 30,167	81%[3]	95%			
Cohort Earnings		$ 28,505	$ 29,730	$ 1,225	$ 36,750x	1,653,750

Enterprise Model and Net Present Social Value

(in real dollars)	Project Years 0	1	2	3 ?	10 [8]
Earnings Value[6]	$ -	$ 545,738	$ 1,091,475	1,653,750	1,653,750
Revenue [7]	$ -	$ 110,000	$ 325,000	$ 350,000	$ 350,000
Total	$ -	$ 655,738	$ 1,416,475	$ 2,003,750	$ 2,003,750
Operating Expenses	$ -	$ 550,000	$ 625,000	$ 625,000	$ 625,000
ZD investment	$440,000[9]	$ 300,000	$ 100,000		
Net	$ (440,000)	$ (194,263)	$ 691,475	$ 1,378,750	$ 1,378,750

Net Present Social Value $9,207,906[10] IRR 97%

1 U.S Census, Current Report 2005
2 CA Dept of Education (2006-2007) derived from Youth Institute demographic overlay.
3 Derived from 1
4 Youth Institute longitudinal tracking.
5 According to The Economist meal mean earnings have been flat in recent decades.Thus present value of incremental earnings is estimated by multiplying number of years with the mean earnings difference.
6 Students are in the proram an average of three years, so acrrued benefit of program participation is assumed to ramp in 1/3,2/3,3/3 fashion.
7 Enterprise earned revenue provides unrestricted general operating funds to support mission. 1st year is actual , subsequent years are estimated. 2nd year run rate was on pace for $4000,000
8 Ten year life assumes moderately successful enterprise. The Youth Institute itself is almost ten years old.
9 Costs include both direct cash and indirect, such as the cost of "360 support" and program due diligence and management.
10 Discount rate made equivalent to the mandated foundation payout rate of 5% where alternative funding has been provided. Assumes horizon inflation rate of 2.5%, as data presented in real terms net discount rate is 2.5%.

Discussion

In the continuing quest to measure and document our philanthropic impact we at ZeroDivide struggle with the same evaluation issues as many of our peers (See Tuan, 2008 for an excellent survey of current efforts). High on this list is study design and reliable data collection. We offer this case study of the YMCA Long Beach Youth Institute, one of our community enterprise investments, as a contribution to the ongoing discussion over evaluating social returns on investment.

The Youth Institute is an intensive year-round after school program in Long Beach, California that uses training in digital media technology to promote positive youth development and enhance the academic success and career readiness of low-income, culturally diverse urban high school students.

As part of our first round of "Big Bet" investments (which seed revenue generating social enterprises at existing community non-profits), ZeroDivide funded the Youth Institute to develop their "Change Agent Productions" enterprise. "Change Agent Productions" is a programmatic extension of the Youth Institute in which professional digital media artists work alongside youth to create fee-based video productions, graphic design projects and digital media trainings. Revenue from the enterprise is reinvested in the work of the Youth Institute.

For the purposes of this study, ZeroDivide sought to evaluate the expected social returns from the combined Youth Institute/Change Agent Productions activities. For simplicity, we will refer to the combination as "YI/CAP or Institute."

Social Value of Incremental Earnings

Our thesis is that the social value of the program can be measured by tracking differences in educational outcomes (and by extension average lifetime earnings) between Institute participants and those of their nonparticipating peers from Long Beach Unified Public Schools. The Institute has an open door policy and participants are representative in terms of both academic readiness and statistical demographics of the general population of Long Beach Unified Public Schools (LBU) middle and high school students (Kirkner and O'Donnell, 2008). LBU is an urban, ethnically diverse school district, with a high proportion of underprivileged youth.

YI/CAP does a good job of tracking youth participants in their program. On average, they train a cohort of 45 students a year, with youth participating in the program for three years. Year-to-year program retention exceeds 95%, with those tracked in the program achieving essentially 100% high school graduation rates. Since youth leaving the program are not easily tracked, we conservatively use the lower 95% program retention rate in our estimate of high school graduation.

US Census data shows that LBU high school graduates have median annual earnings of $30,167 compared to non-graduates' earnings of $21,417 (Current Report, 2005). Taking LBU's 9th -12th grade drop-out rate of 19% and applying the differential mean annual earnings for high school graduates vs. drop-outs provides a baseline annual earnings rate of $28,505. This is $1,225 below the $29,730 achieved by Youth Institute participants.

Taking that $1,225 per year in mean earnings attributed to participation in the Youth Institute program enables us to extend our analysis to estimate lifetime impact. Assuming a working career is 30 years and that median real, or inflation adjusted, earnings remain flat as they have for recent decades. The present value of the earnings gain is simply $1,255 x 30 years or $36,750 per person. As mentioned earlier, the Youth Institute averages about 45 participants per year, so the cohort gain is approximately $1.7 million. Our financial model initially ramps up the annual present value of benefit over three years, since that is the typical period that youth spend being trained at the Institute (the benefit accrued to the initial class is 1/3 the first year, 2/3 the second year, until reaching the steady state $1.7 million benefit in the third and subsequent years).

Enterprise Model and Net Present Social Value

We estimate the present value of the combined YI/CAP digital media production social enterprise as:

1. the discounted value of the annual earnings gain calculated above, plus
2. the supporting revenue, and then subtracting
3. the annual operating and initial start-up costs over a reasonable operating lifespan (see the financial model page 2)

This discounted cash flow approach is common to company valuation and other types of financial analysis. Thus, after a start-up ramp period, we project that the

Institute enterprise can conservatively generate an average annual revenue of $350,000. This is derived from a bottom-up revenue build, incorporating

1. typical project scope,
2. pricing,
3. team project capacity, and
4. order pipeline or demand.

Encouragingly, the YI/CAP posted revenue comfortably in excess of $100,000 in its 2008 inaugural year without the benefit of an installed client base or sophisticated advertising and marketing. Finishing the first quarter of 2009, YI/CAP was on pace to exceed $400,000 in earned income for the year.

We arrive at the figure of $9.2 million net present value by taking that $400,000 annual income figure and applying the following assumptions.

1. At least a 10 year lifespan for CAP, since the enterprise has already proven viable and the parent and supporting local entity is already almost 10 years old.
2. Gross revenue for the valuation, since all of the earned money flows back to YI/CAP in the form of unrestricted support.
3. In the absence of this project revenue, 100% funding would be derived from traditional contributions and foundation grants, as it has been in the past. We elect a 5% discount rate as this is essentially the entity's "cost of capital" in the form of alternative funding via foundation payout rate.
4. We estimate the investment cost of seeding this enterprise to be the combined value of ZeroDivide's direct cash and indirect "360" project support of the project valued at $840,000 over two years.

Using all of these factors to run our financial model, we estimate a net present social value of this project as some $9.2 million. Please see page 2 for the financial model.

About: ZeroDivide™ invests in community enterprises that leverage technology to benefit people in low-income and other underserved communities. Our investments help to create enterprises within nonprofits to achieve a new or expanded revenue source to support their social mission. Through this ground-up approach we invest in the ideas, talents, and know-how of underserved populations to build economically stable and civically engaged communities.

As a foundation, we do more than just write a check; through our community, philanthropic and corporate partnerships, we help nonprofit organizations find new revenue sources to become more self-sustaining.

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